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NATIONAL WEATHER SERVICE

Operations Manual

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| <i>Part</i> | <i>Chap</i> |
| D | 82 |

TRAINING PROGRAM FOR PILOT WEATHER BRIEFERS

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1. General. The National Weather Service (NWS) is responsible for developing and maintaining a pilot weather briefer (PWB) training program, and evaluating and certifying pilot weather briefers in the NWS and the Federal Aviation Administration (FAA). This chapter describes the policy and procedures related to the training, evaluation and certification of pilot weather briefers. Although the training programs for NWS and FAA PWB candidates are different, the standard for awarding and maintaining pilot weather briefing certificates are the same for both agencies.

2. Objectives of Training. The objectives of the PWB training program are to:

- a. Ensure NWS personnel and FAA flight service specialists can perform assigned aviation weather briefing duties.
- b. Promote a high quality aviation weather briefing service using the latest meteorological concepts and briefing tools.

3. Organizational Responsibilities.

3.1 Weather Service Headquarters (WSH). The Office of Climate, Water, and Weather Services, shall provide overall direction and management of the PWB training/evaluation/certification program. Agency responsibilities, working relationships, and funding arrangements for the FAA's Mike Monroney Aeronautical Center (hereafter referred to as the FAA Academy) are detailed in an FAA and NWS interagency agreement. The interagency agreement is renegotiated at least every 5 years.

3.2 Regional Headquarters (RH). All RH/regional aviation meteorologists (RAM), or equivalent, shall (1) assist WSH in achieving the PWB training program objectives; and (2) provide the needed resources to support PWB training and evaluation responsibilities at appropriate Weather Forecast Offices (WFO).

3.3 NWS Office at the FAA Academy. The responsibilities of the NWS Office at the FAA Academy are detailed in the interagency agreement between the FAA and the NWS. The office shall:

- a. Provide required instruction and training to FAA PWB candidates.
- b. Develop field training courses for FAA pilot weather briefers.
- c. Administer and grade written examinations to FAA PWB candidates.
- d. Administer and grade oral examinations to FAA and NWS PWB candidates.
- e. Issue Certificates of Authority to FAA and NWS certified pilot weather briefers.
- f. Maintain a data base of FAA and NWS PWB certificates.
- g. Administer proficiency checks and proficiency examinations, upon request, to certified FAA and NWS pilot weather briefers. Proficiency checks will also be administered at random.

3.4 Weather Forecast Office (WFO). Each office shall:

- a. Provide training to NWS PWB candidates at NWS offices with PWB responsibility.
- b. Conduct semi-annual visits to FAA PWB offices within their county (or equivalent) warning areas.
- c. Provide, in coordination with the FAA's Automated Flight Service Station (AFSS) management, and if resources permit, supplementary training (e.g., weather refresher, local weather-specific) to FAA pilot weather briefers.
- d. Make recommendations to the AFSS management/training officer, as needed, to ensure effective use of NWS products and services by AFSS PWB staff.
- e. Identify deficiencies noted during AFSS visits and bring them to the attention of appropriate AFSS officials.
- f. Administer proficiency checks, or if desired, contact

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the NWS Office at the FAA Academy to administer a proficiency check.

g. Contact the NWS Office at the FAA Academy when it is determined (in coordination with local FAA management) a proficiency examination is required.

h. Provide remedial weather training to FAA employees upon request from AFSS management.

4. Procedural Directive References.

Appendix A: Pilot Weather Briefer Training, Certification,
and Proficiency Evaluations Procedures

Appendix B: Invalidating and Revalidating NWS and FAA PWB
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PILOT WEATHER BRIEFER TRAINING, CERTIFICATION, AND PROFICIENCY EVALUATIONS PROCEDURES

1. National Weather Service PWB Training and Certification.

1.1 NWS Training Requirements. NWS forecasters, as providers of aviation oriented products and services, must be aware of how weather phenomena affect aircraft performance and pilot decision making. NWS personnel responsible for providing pilot weather briefings need additional training and certification.

1.2 Interim Training Arrangements. The present PWB course is canceled and replaced by interim regional training programs managed by the NWS regions. Regional training can be accomplished by aviation operations courses developed within the NWS regions; training programs developed in collaboration with the university community, the FAA, and other aviation organizations; or other solutions. Directives and guidance related the regional interim training arrangements shall be detailed within Regional Operations Manual Letters (ROML).

At a minimum, these programs shall provide:

- a. Training about aviation flight operations and aviation community requirements
- b. Training in specific techniques, procedures, and products used in formal pilot weather briefings by NWS and FAA briefers.

The NWS will develop an agency-wide aviation operations course (AOC) by August 1, 2001. The AOC will be dedicated to aviation training and will replace the regional training programs.

Upon successful completion of the regional aviation operations training program, employees in jobs NOT requiring pilot briefing authority shall be issued a Certificate of Accomplishment in Pilot Weather Briefing Training, WS Form D-15 (exhibit D-82-A1) by the appropriate RH (through the employee's supervisor). WS Form D-15 DOES NOT AUTHORIZE THE HOLDER TO CONDUCT OFFICIAL PILOT WEATHER BRIEFINGS. The PWB Qualification Report, WS Form D-5 (exhibit D-82-A2) will be used to notify NWS employees that the required aviation

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operations training course/program has been successfully completed.
After

Certificate No. _____ Date _____

UNITED STATES DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE

**Certificate of Accomplishment
in Pilot Weather Briefing Training**

THIS IS TO CERTIFY THAT _____

has successfully completed the aviation operations course training requirements prescribed and administered by the National Weather Service.

John J. Kelly, Jr.
Acting Administrator for Weather Service

Department Personnel Photo Authorized _____
NWS Form D-15 (Rev. 1-1-74)
by PG 3500101-10-01

1. This certificate does not authorize the holder to provide pilot weather briefing services.

2. This certificate cannot be canceled or invalidated.

3. This certificate will be upgraded to a "Certificate of Authority for Pilot Weather Briefing" when the holder is selected for or assigned to duty which requires pilot weather briefing services to be performed, and after successful completion of examination requirements.

4. Certificates will be prepared in duplicate. The original will be forwarded to the employee and the copy is placed in the individual's personnel folder.

Exhibit D-82-A1: WS-Form D-15: Certificate of Accomplishment in Pilot Weather Briefing Training

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| | | | |
|---|--|--|--|
| WS Form D-5 (8-81) PREP. BY D-82 | | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE | |
| PILOT WEATHER BRIEFING NWS AND FAA EMPLOYEE - QUALIFICATION REPORT | | | |
| Day window envelope (Enter Examinee's name and address) To: Through: FAA Facility Chief or NWS WFO MIC | | From: _____ Over: _____ <input type="checkbox"/> WFO Examiner <input type="checkbox"/> WFO MIC <input type="checkbox"/> MIC (FAA Academy RAM (in expiration)) Station: _____ | |
| cc: as appropriate | | | |
| I - TYPE OF EXAMINATION | | | |
| <input type="checkbox"/> Written Examination <input type="checkbox"/> Written Re-examination | | <input type="checkbox"/> Oral Examination <input type="checkbox"/> Oral Re-examination <input type="checkbox"/> Proficiency Examination | |
| | | Date (Or or about): _____ At: <input type="checkbox"/> This WFO <input type="checkbox"/> Your Office <input type="checkbox"/> FAA Academy | |
| II - RECORD OF WRITTEN EXAMINATION Series _____ Test # _____ (if applicable) | | | |
| Passed/Failed <input type="checkbox"/> <input type="checkbox"/> Weather Analysis/PWB Examination <input type="checkbox"/> <input type="checkbox"/> Radar/RRWDS Examination <input type="checkbox"/> <input type="checkbox"/> Satellite Interpretation Examination <input type="checkbox"/> <input type="checkbox"/> PWB Re-examination | | Score _____ Date _____ Areas of Weakness/Remarks | |
| III - RECORD OF ORAL EXAMINATION | | | |
| Passed/Failed <input type="checkbox"/> <input type="checkbox"/> Oral Examination <input type="checkbox"/> <input type="checkbox"/> Oral Re-examination <input type="checkbox"/> <input type="checkbox"/> Proficiency Examination | | Score _____ Date _____ Areas of Weakness/Remarks | |
| IV - STATUS OF QUALIFICATIONS - National Weather Service Regional Director will confirm the following order by letter and issue the appropriate certificate. | | | |
| <input type="checkbox"/> You have successfully completed the required aviation operations course training. WS Form D-5a, Certificate of Accomplishment will be issued. Congratulations. | | | |
| <input type="checkbox"/> You have successfully completed the required aviation operations course training and will be scheduled for your oral examination. | | | |
| <input type="checkbox"/> You have successfully completed all the requirements for certification in pilot weather briefing. This document will serve as temporary Certificate until your WS Form D-5a, Certificate of Authority, is received. Congratulations. | | | |
| <input type="checkbox"/> Your PWB Certificate of Authority is reinstated due to: <input type="checkbox"/> successful re-examination results <input type="checkbox"/> return to a PWB position within the required 2 year period and successful completion of oral re-examination. | | | |
| <input type="checkbox"/> Recommendation for invalidating/canceling of PWB Certificate of Authority is made because you: <input type="checkbox"/> Change of job option to one not requiring PWB duties <input type="checkbox"/> Resignation _____ (date) <input type="checkbox"/> Retirement _____ (date) <input type="checkbox"/> Unsatisfactory Examination score _____ (date) | | | |
| <input type="checkbox"/> Recommendation for temporary suspension of your PWB Certificate of Authority is made: <input type="checkbox"/> pending results of the oral re-examination scheduled on _____ <input type="checkbox"/> due to unsatisfactory performance during a proficiency examination on _____ | | | |
| <input type="checkbox"/> Your PWB Certificate of Authority is reassigned because of: <input type="checkbox"/> valid PWB certificate # _____ was misapplied to _____ <input type="checkbox"/> name changed from _____ to _____ | | | |

Exhibit D-82-A2:

WS Form D-5: Pilot Weather Briefing - NWS and FAA Specialist Qualification Report

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WS Form D-15 has been issued, all copies of WS Form D-5 shall be destroyed to comply with NOAA Administrative Order 205-15 (effective 11/28/90), "Privacy Act," except in circumstances where the employee will be required to obtain a Certificate of Authority (see below).

For NWS employees whose duties include official pilot weather briefings, the successful completion of the interim regional aviation operations training course/program is the first step toward obtaining a PWB Certificate of Authority (see section 1.3). A copy of WS Form D-5, indicating the successful completion of the required aviation operations training will be forwarded to the meteorologist in charge (MIC) of the NWS Office at the FAA Academy (see sections 1.3 and 1.3.1).

Any NWS employee having a valid Certificate of Accomplishment or a valid Certificate of Authority shall not be required to participate in the regional aviation operations training program. However, any such NWS employee may participate in the training program on a voluntary basis.

1.3 Awarding PWB Certificates of Authority to NWS employees.
Only certified personnel may perform pilot weather briefings. Certificates of Authority for Pilot Weather Briefing, WS Form D-3 (exhibit D-82-A3), shall be issued to NWS briefers by the NWS Office at the FAA Academy after successful completion of a NWS regional training course/program and an oral examination.

1.3.1 Oral Examination. The NWS office manager is responsible for ensuring NWS PWB candidates are prepared to take the oral examination. Upon determination that the candidate has received adequate training and is sufficiently prepared, the employee will be permitted to take the oral examination required for certification by performing a demonstration briefing for the MIC of the NWS Office at the FAA Academy, or designated staff.

The oral examination shall be given only to those employees who are in pilot weather briefing assignments or who will enter briefing assignments within 60 days. The oral examination will normally be given by telephone, but, on occasion, may be given at the duty station.

| | | |
|--|--|--|
| Certificate No. _____ |  | Date _____ |
| <p>UNITED STATES DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE</p> <h2 style="margin: 0;">Certificate of Authority</h2> <p style="margin: 0;">FOR</p> <h2 style="margin: 0;">Pilot Weather Briefing</h2> <p style="margin: 0;">THIS IS TO CERTIFY THAT</p> | | |
| <p>was on this date adjudged qualified to conduct official Pilot Weather Briefings and is hereby so authorized, subject to instructions on reverse side hereof.</p> | | |
| <p>_____ <i>Signature of Person Above Authorized</i></p> |  | <p style="text-align: right;">  <i>Robert J. Kelly</i> <small>Robert J. Kelly Administrator for Weather Services</small> </p> <p style="text-align: right; margin-top: 20px;"> <small>Meteorologist in Charge NWS Office Mike Monroney Aeronautical Center</small> </p> |

1. Pilot Weather Briefing is defined as: The translation of weather observations and forecasts, including surface, upper air, radar, satellite, and pilot reports into a form directly usable by the pilot or flight supervisory personnel to formulate plans and make decisions for safe and efficient operation of aircraft.
2. This certificate is issued to National Weather Service personnel required to brief pilots as evidence that they have satisfied National Weather Service requirements for that duty.
3. Certificates will be issued by the Meteorologist in Charge, National Weather Service (NWS) Office at the Mike Monroney Aeronautical Center (FAA Academy).
4. Certificates will be prepared in triplicate. The original will be forwarded to the employee's supervisor. Copies will be kept at the FAA Academy and inserted in the employee's personnel folder.
5. Certificates will be valid for an indefinite period unless invalidated, suspended or canceled. They should be accessible for review and inspection at the holder's duty station.
6. Certificates will be invalidated if the holder terminates employment or changes job option to a position not requiring pilot weather briefing. Holders of invalid dated certificates may be recertified after satisfactory completion of reexamination requirements.
7. Supervisory officials of the National Weather Service may request a proficiency examination at any time. If substandard performance is demonstrated, the certificate will be suspended.
8. Certificates will be canceled if the holder fails to demonstrate satisfactory performance upon reexamination following a period of suspension.

Exhibit D-82-A3: WS Form D-3: Certificate of Authority for Pilot Weather Briefing (NWS)

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The oral examination must ensure that the candidate is able to assimilate all pertinent weather data and give it to the pilot in a logical, concise, and easily understood manner. The briefing provided during the examination should leave no doubt as to the present and forecast weather conditions. It must, at a minimum, cover all available weather information specified as needed by the pilot. The oral examination should assess the candidate's basic understanding of radar and satellite information as a pilot weather briefing tool.

WS Form D-28, Oral Pilot Weather Briefing Evaluation Sheet (exhibit D-82-A4), shall be used to determine the student's oral examination grade. The demonstration briefing will be evaluated in three general areas: (1) acquisition of background information, (2) briefing content, and (3) quality factors. Designated points are assigned to elements within each of these evaluation areas. If the trainee misses one adverse weather condition, all of the points allotted for the "adverse conditions" section shall be deducted - overlooking an adverse condition may hinder the pilot's ability to determine whether it is safe to fly. Detailed evaluation guidelines are contained in Appendix C. It specifies the factors to be evaluated, the standards of performance, and the performance indicators.

The pass-fail decision rests to a great extent on the trainee's coverage of adverse weather conditions. To ensure objective quality control, validation, and standardization of oral examinations, briefings should be chosen so that at least two types of adverse weather conditions exist along the route of flight. This will ensure a uniform level of difficulty and make the scores reliable indicators of individual performance. Adverse weather conditions include: low ceilings and visibilities, mountain obscurations, turbulence, thunderstorms, freezing precipitation, icing, and strong low-level winds and/or shear. The route of flight should be at least 300 nautical miles long. The examination shall include at least one low-level and one high-level route segment. For the purposes of the examination, 24,000 feet above mean sea level separates low-level from high-level.

The passing grade is 70 percent. If the trainee fails the PWB oral examination, the MIC at the FAA Academy should discuss problem areas with the student and his/her supervisor prior to scheduling a reexamination. Subsequent failure shall require a recommendation by

the MIC to the appropriate RH, through the NWS office manager, on the trainee's suitability for pilot weather briefing.

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| WS FORM D-28 1-92 | | U.S. DEPARTMENT OF COMMERCE NATIONAL TOLL FREE AND ATMOSPHERIC ADMINISTRATION | | PIREFR | |
|---|--|---|-------|--|---|
| ORAL PWB EVALUATION | | | | STATION | |
| 1. BACKGROUND INFORMATION (10 points max.) | | | | EVALUATOR | |
| TYPE OF FLIGHT | | MAX SCORE | SCORE | DATE | |
| AIRCRAFT ID/PILOT NAME | | | | WRITTEN EXAM SCORE | |
| AIRCRAFT TYPE | | | | ORAL EXAM SCORE | |
| DEPARTURE POINT | | | | 3 QUALITY FACTORS (30 points max.) | |
| ROUTE OF FLIGHT | | | | LOGICAL ORAL | 4 |
| DESTINATION | | | | COMPREHENSIVENESS | 4 |
| ALTITUDE | | | | ATTITUDE | 4 |
| TIME OF DEPARTURE | | | | CONFIDENCE | 2 |
| TIME IN ROUTE | | | | PACE | 5 |
| TOTAL | | 10 | | VOICE | 2 |
| 2. BRIEFING CONTENT (60 points max.) | | | | LANDING SKILLS: 10 QUESTIONS OF PILOT 3 | |
| ADVERSE CONDITIONS | | 30 | | MISCELLANEOUS (e.g. Use of Weather Aids, Knowledge of Local Terrain, Demonstration of Aeronautical Knowledge, Use of Satellite Methods) | |
| SYNOPSIS | | 10 | | 0 | |
| CURRENT CONDITIONS | | 10 | | TOTAL | |
| FORECAST CONDITIONS | | 10 | | 30 | |
| TOTAL | | 60 | | Minimum Passing Grade - 72% | |
| | | | | TOTAL SCORE | |
| | | | | 30 | |

Exhibit D-82-A4: WS Form D-28: Oral PWB Evaluation Sheet

1.3.2 Issuance of Certificates. The MIC at the FAA Academy shall use the PWB Qualification Report, WS Form D-5 (exhibit D-82-A2), for notification of examination results. Distribution shall be: original to the trainee through the NWS office manager, one copy for the NWS office file, and one copy for RH. The MIC at the FAA Academy shall issue a Certificate of Authority for Pilot Weather Briefing, WS Form D-3 (exhibit D-82-A3) and forward it to the appropriate NWS office manager as soon as possible after the appropriate notification has been accomplished.

1.3.3 Maintenance of Files. The NWS Office at the FAA Academy shall maintain a current listing of pilot weather briefers, certificate numbers, issuance dates, etc., on a computerized equivalent of revised WS Form D-29 (formerly WS Form A-18), Personnel and Action Report (exhibit D-29-A5). The original Certificate of Authority shall be kept in a safeguarded NWS office PWB file. A copy may be given to the briefer, if requested. After WS Form D-3 has been issued, all copies of WS Forms D-5 and D-28 shall be destroyed to comply with NOAA Administrative Order 205-15, "Privacy Act." WS Form D-28 shall be retained by the NWS Office at the FAA Academy for a period of no more than one year from the date of the last examination in circumstances where the employee has failed the oral examination. A copy will be sent to the NWS office manager to assist in subsequent discussions of problem areas with the trainee prior to scheduling a reexamination.

WS Form D-3 Certificates of Authority shall be forwarded to the new NWS office when the briefer is reassigned. The NWS office manager will notify the MIC at the FAA Academy and the RAM or equivalent upon receipt of the Certificate of Authority. Under certain circumstances, the reassignment shall require a proficiency check (see section 3.1).

2. FAA PWB Training and Certification.

2.1 The Academy Resident Course. The initial training program for FAA PWB candidates is accomplished at the FAA Academy. The MIC at the FAA Academy has the overall responsibility of organizing and conducting the weather portions of the resident course. Weather instruction is provided by the MIC and a staff of NWS meteorologists. Briefing practice is provided in a model AFSS using both "canned" and "live" weather.

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Exhibit D-82-A5: WS Form D-29: Personnel and Action Item Report

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2.2 Certification of FAA Pilot Weather Briefers. Every FAA PWB candidate must be certified by the MIC at the FAA Academy to perform official pilot weather briefings without supervision. A Certificate of Authority for Pilot Weather Briefing (FAA), WS Form D-3a (exhibit D-82-A6), entitling the employee to perform official pilot weather briefings, shall be issued to the candidate upon successful completion of written and oral examinations. Further details of the FAA's AFSS pilot weather briefing program are contained in WSOM Chapter D-26. 2.2.1

2.2.1 Written Examinations. Students enrolled in the resident training at the FAA Academy are required to take the written weather analysis, satellite, and radar examinations administered by the NWS Office at the FAA Academy. After completing the FAA Academy training, the student is assigned to an air traffic field facility for further training and experience under actual working conditions.

A student failing the written examinations at the FAA Academy may be allowed to take them again at the field facility. In this circumstance, the examinations shall be administered by the air traffic manager. The test and answer sheets shall be obtained from the MIC at the FAA Academy and returned for grading and further processing. Failure of the student to pass the examinations (passing grade is 70 percent) given at the FAA field facility shall require notification (through WS Form D-5) of the appropriate FAA region. The form shall be accompanied by a written recommendation from the MIC at the FAA Academy on the student's suitability for pilot weather briefing duties. Copies of WS Form D-5 and the recommendation shall be sent to the student's facility manager.

2.2.2 Oral Examination. An oral examination shall be given by the MIC at the FAA Academy, or designee, when the student's supervisor or training officer feels that the trainee is proficient to perform weather briefings without direct supervision and the student has successfully completed the required written examinations. The oral examination will normally be accomplished by telephone. Examination procedures and criteria for evaluation and satisfactory completion are described in section 1.3.1.

2.2.3 Issuance of Certificate of Authority (FAA). The MIC at the FAA Academy shall forward the results on WS Form D-5 (exhibit D-82-A3) to the student after the student has successfully completed

the written examinations at the FAA Academy. Copies shall be provided to the student's facility manager. WS Form D-5

| | | |
|---|--|--|
| Certificate No. _____ |  | Date _____ |
| UNITED STATES DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE | | |
| <h1 style="margin: 0;">Certificate of Authority</h1> <p style="margin: 0;">FOR</p> <h2 style="margin: 0;">Pilot Weather Briefing</h2> <p style="margin: 0;">THIS IS TO CERTIFY THAT</p> | | |
| <p>_____</p> <p>was on this date adjudged qualified to conduct official Pilot Weather Briefings and is hereby so authorized, subject to instructions on reverse side hereof.</p> | | |
| _____ <small>Signature of Person Above Authorized</small> |  |  <small>Acting Administrator for Weather Service</small> |
| Memorandum of Understanding NWS Office Mike Monroney Aeronautical Center | | |

1. Pilot Weather Briefing is defined as: The translation of weather observations and forecasts, including surface, upper air, radar, satellite, and pilot reports into a form directly usable by the pilot or flight advisory personnel to formulate plans and make decisions for safe and efficient operation of aircraft. This certificate does not authorize the origination of weather forecasts.
2. In accordance with the Memorandum of Agreement between the Federal Aviation Administration (FAA) and the National Oceanic and Atmospheric Administration (NOAA) for the Establishment of Working Arrangements for Providing Aviation Weather Service and Meteorological Communications, January 24, 1977, this certificate is issued after a Flight Service Specialist completes the prescribed Pilot Briefing Training Course, and Satisfactorily passes the required written and oral examination.
3. Certificates will be issued by the Meteorologist in Charge, National Weather Service (NWS) Office at the Mike Monroney Aeronautical Center (FAA Academy).
4. Certificates will be prepared in duplicate. The original will be forwarded to the facility chief and the copy retained by the NWS Office at the FAA Academy.
5. Certificates will be valid for an indefinite period unless invalidated, suspended or canceled by a designated issuing office. They should be accessible for review and inspection at the holder's duty station at all times.
6. Certificates will be invalidated if the holder terminates employment or changes job option to a position not requiring pilot weather briefing services. Holders of invalidated certificates may be re-certified after satisfactory completion of reexamination requirements.
7. Supervisory officials of the Federal Aviation Administration or the National Weather Service may request a proficiency examination at any time. If substandard performance is demonstrated, the certificate will be suspended.
8. Certificates will be canceled if the holder fails to demonstrate satisfactory performance upon reexamination following a period of suspension.

Exhibit D-82-A6: WS Form D-3a: Certificate of Authority for Pilot Weather Briefing (FAA)

serves as a record of accomplishment and as a notice that the newly assigned flight service specialist will soon require oral examination. Similar notification procedures shall apply in circumstances where a student has successfully completed a written reexamination at an assigned FAA facility.

After the student passes the oral examination, a completed WS Form D-5 shall be forwarded to the student and a copy sent to the facility manager. A second copy will be temporarily kept on file at the FAA Academy. The MIC shall issue a Certificate of Authority, WS Form D-3a (exhibit D-82-A6) as soon as possible. The original shall be sent to the FAA facility manager. After distribution of WS Form D-3a, all copies of WS Form D-5 and the test answer sheets shall be destroyed as described in section 1.3.3. All issued certificate numbers shall be maintained at the FAA Academy.

3. Proficiency Checks and Proficiency Examinations of Pilot Weather Briefers.

3.1 Proficiency Checks. Proficiency checks are informal evaluations of pilot weather briefers and can be equated with routine quality control checks. WS Form D-28 may be used as guidance.

Proficiency checks are required in the following circumstances:

a. When a pilot weather briefers's reassignment involves a move of more than 300 miles, or when the surrounding terrain or prevailing weather regimes of the old and new stations are significantly different.

b. When a pilot weather briefers, for whatever reason, has not provided a briefing for a least 6 months (e.g., temporary assignments, extended illness).

c. To revalidate the PWB certificates of FAA/NWS instructors, or Center Weather Service Unit (CWSU) and Spaceflight Meteorology Group (SMG) meteorologists (see Appendix B).

WFOs and FAA facility supervisors may request the NWS Office at the FAA Academy conduct the proficiency checks under the circumstances described above.

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Additionally, in coordination with FAA facility supervisors, proficiency checks may be administered at any time by the WCM during routine AFSS visits.

Proficiency checks administered by WFOs shall be documented on WS Form D-29 and forwarded to the NWS Office at the FAA Academy to be incorporated into the centralized PWB certificate data base.

3.2 Proficiency Examinations. Proficiency examinations are formal evaluations identical to the oral certification examinations and are conducted by the NWS Office at the FAA Academy. Supervisory officials in the NWS and FAA may request proficiency examinations for pilot weather briefers at any time. This may be based on apparent deficiencies discovered during proficiency or routine quality control checks. The MIC shall respond to such requests in a timely manner. WS Form D-28 shall be used to determine the briefer's performance grade (see section 1.3.1). Notification of results on WS Form D-5 shall be handled in accordance with sections 1.3.2 or 2.2.3 of this chapter.

Certificates of Authority shall be suspended if briefing performance is substandard. When a Certificate is suspended, a briefer shall not provide a briefing without immediate supervision. Another proficiency examination will be scheduled as soon as possible after appropriate remedial training is accomplished. FAA facility supervisors may request training assistance from the nearest WFO, if necessary, or obtain training recommendations and available resource material from the NWS Office at the FAA Academy.

The PWB Certificate of Authority shall be canceled if the briefer again fails to demonstrate satisfactory performance. The procedures as outlined in sections 1.3.1. or 2.2.1, as appropriate, shall apply.

APPENDIX B TRAINING PROGRAM FOR PILOT WEATHER BRIEFERS (D-82)

INVALIDATING AND REVALIDATING NWS AND FAA PWB CERTIFICATES
OF AUTHORITY

1. Invalidating Certificates of Authority. When the holder of a Certificate of Authority terminates employment or changes to a position not requiring pilot weather briefing duties, the NWS or FAA facility supervisor will notify the MIC at the FAA Academy as soon as possible. The MIC shall invalidate the Certificate of Authority (except as noted in sections 3 and 4). The invalidation will be entered on the computer equivalent of WS Form D-29 and remain recorded for 2 years after the date of invalidation. Additionally, the MIC will note the invalidation on WS Form D-5 and send it to the briefer through the NWS/FAA facility supervisor, as appropriate. A copy will be sent to the appropriate RH in cases involving an NWS employee. Once it is ascertained that the Certificate of Authority has been invalidated, the original Certificates of Authority maintained in the station PWB file and all copies of WS Form D-5, must be destroyed.

2. Revalidating Certificates of Authority. When the Certificate of Authority has been invalid for 2 years or less, recertification can be accomplished by successfully completing an oral examination. In this circumstance, a new certificate shall be issued by the MIC at the FAA Academy. If the holder fails the examination, or the Certificate of Authority has been invalid for more than 2 years, the following procedures shall apply:

a. For NWS employees: the WFO shall provide sufficient remedial training to adequately prepare the employee for successful completion of an oral reexamination.

b. For FAA employees: the successful completion of both written and oral reexaminations shall be required. Procedures for re-taking the written examination are the same as described in section 2.2.1.

3. Revalidation of PWB Certificates for FAA/NWS Instructors. The PWB certificates of FAA and NWS pilot weather briefing instructors at the FAA Academy remain valid while they are assigned to the facility. Their training duties should be considered similar to performing PWB duties at an FAA or NWS office. Although exempt from any reexaminations upon return to pilot weather briefing duties

in the field, former instructors must have their certificates revalidated. They are subject to the same proficiency checks as a briefer transferring directly from one field station to another.

FAA and NWS personnel assigned as PWB instructors shall have all PWB records at their previous duty station transferred to the FAA Academy. The MIC shall maintain custody of the original Certificates of Authority. The records shall be sent to the new duty office when the personnel are reassigned back to the field.

4. Revalidation of PWB Certificates for Center Weather Service Unit (CWSU) and Spaceflight Meteorology Group (SMG) Meteorologists. PWB Certificates of Authority issued to CWSU and SMG meteorologists shall remain valid during their period of assignment to Air Route Traffic Control Centers (ARTCC), and the Johnson Space Center in Houston, Texas, respectively. The unique duties of CWSU meteorologists include routine aviation weather briefings to ARTCC personnel, occasional informal courtesy briefings to FAA pilot employees, briefings in support of Air Force One operations, special briefings for other Government units, and providing assistance to pilots in weather-related emergencies through ARTCC controllers.

Likewise, SMG meteorologists provide routine briefings to Space Center personnel and special briefings to other Government units. The CWSU and SMG briefing duties are comparable to the PWB function at a WFO. CWSU and SMG meteorologists are therefore exempt from the reexamination requirements applied to those whose PWB duties lapse for a period of over 2 years. The certificate of a CWSU meteorologist transferring from an ARTCC to a WFO having PWB responsibility must be revalidated. This will require the successful completion of a proficiency check at the new location. The appropriate WFO should be contacted as soon as possible to expedite the revalidation process.

APPENDIX C TRAINING PROGRAM FOR PILOT WEATHER BRIEFERS (D-82)

PILOT WEATHER BRIEFING ORAL EXAMINATION PERFORMANCE STANDARDS

Performance standards for the presentation of pilot briefings have been developed for NWS evaluating officials for NWS and FAA employees taking the oral examination. The purpose of this Appendix is to provide guidance in the administration of, and preparation for, the ORAL PILOT WEATHER BRIEFER EXAMINATION. In so doing, it is intended that the examination be standardized and that the evaluation factors be uniformly applied. This is to ensure compliance with the Equal Employment Opportunity Commission and Office of Personnel Management guidelines for test validity and impartiality. Care has been taken to ensure that all tasks and performance indicators are consistent with official publications, interpretation, and guidance.

"Expected Performance" categories are identified on the left side of each page. Statements of criteria to be measured for each task are labeled "Performance Indicators," and are printed on the right side of each page. "Expected Performance" is measured by observing actual performance, and comparing it against the "Performance Indicators."

"Complete" and "accurate" are the basic criteria for evaluation of performance.

Supplementary information has been provided, where necessary, to convey intent and/or to furnish additional instruction and guidance.

1. BACKGROUND INFORMATION

EXPECTED PERFORMANCE

PERFORMANCE INDICATOR

A. Obtains required background information

Utilizes checklist and briefing background information that includes:

- Type of flight- Visual Flight Rules (VFR), Instrument Flight Rules (IFR), etc.
- Aircraft identification or pilot name
- Aircraft type
- Departure point
- Estimated time of departure (ETD)
- Proposed altitude
- Route of flight
- Destination
- Estimated time en route (ETE)
- Estimated time of arrival (ETA)

Supplementary Information

- 1) The examiner will ensure that the ETD is within 2 hours of the time of the briefing.
- 2) ETA is requested or computed from ETD and ETE.
- 3) In order to receive the allotted evaluation credit for each item of "background information," the examinee must obtain the items prior to the briefing.

2. BRIEFING CONTENT

EXPECTED PERFORMANCE

PERFORMANCE INDICATOR

A. States applicable adverse conditions

A statement of significant meteorological and/or aeronautical information that might influence the pilot to cancel, postpone, or alter

APPENDIX C TRAINING PROGRAM FOR PILOT WEATHER BRIEFERS (D-82)

the proposed flight.
Adverse or hazardous
conditions to be included
are:

| <u>EXPECTED PERFORMANCE</u> | <u>PERFORMANCE INDICATOR</u> |
|---|--|
| | <ul style="list-style-type: none">- Thunderstorms- Icing- Turbulence and strong low level winds of weather advisory significance- Low level wind shear- Freezing precipitation- Ceilings and visibilities below VFR, minima, mountain obscurement and/or low IFR (LIFR) conditions. |
| | Conditions must be: |
| | <ul style="list-style-type: none">- Pertinent to the proposed route or alternate- Pertinent to the type of aircraft and flight IFR/VFR)- Pertinent to the proposed time of flight |
| B. (FAA ONLY) Recognize and apply VFR not recommended (VNR) | <ul style="list-style-type: none">- States "VFR not recommended" (determined from basic VFR cloud and visibility requirements)- Supports VNR statement with brief description of the meteorological conditions, whether actual or forecast, whether surface based or aloft, which might make VFR flight doubtful. |

Supplementary Information

1) Adverse conditions and VNR are included as one item on the evaluation sheet. Every evaluation briefing should contain adverse

conditions. If they are pertinent, they must be given in addition to any synoptic statement.

Failure to cover any of the adverse conditions listed above (or VNR statement for FAA facilities), when applicable to a given route, will result in forfeiture of all evaluation credit allotted to "ADVERSE CONDITIONS" (i.e., 30 points). The inclusion of nonpertinent conditions will result in point deductions. Due to the individual subjectivity involved in the determination of adverse weather conditions, examinees may at times communicate conditions not noted directly on the route. If they can justify their statements to the evaluator's satisfaction, there will be no penalty for "nonpertinent information" on the evaluation sheet.

2) If a weather advisory (WST, WS, WA, CWA, AWW) is used to support the weather briefing, the examinee shall identify the source, e.g., Convective SIGMET 34C, DFW SIGMET BRAVO TWO, etc.

EXPECTED PERFORMANCE

PERFORMANCE INDICATORS

C. Provides synopsis

Brief verbal statement outlining the dominant feature or weather-generating factor(s) along the pilot's intended route of flight. Statement should include applicable:

- Pressure patterns (surface and aloft)
- Wind flow patterns
- Surface fronts and troughs
- Other pictorial details

D. Provides current, en route, and terminal weather conditions

Summarize the current weather for departure, en route, and destination by including:

1) VFR flight

Required data when applicable to proposed flight:

- Departure weather
- Cloud cover amounts and bases

APPENDIX C TRAINING PROGRAM FOR PILOT WEATHER BRIEFERS (D-82)

- Cloud tops if pilot indicates VFR flight on top is intended
- Mountain obscurement
- Visibilities
- Obscuring phenomena
- Turbulence, including strong low-level shear/winds
- Thunderstorms
- Icing
- Arrival (destination) weather
- Alternate routing when appropriate

EXPECTED PERFORMANCE

PERFORMANCE INDICATORS

2) IFR flight

Required data when applicable to proposed flight:

- Departure weather
- Climb out weather
- Cloud cover amounts, bases, and tops
- Thunderstorms, especially embedded
- Turbulence, including strong winds
- Wind shear
- Freezing level(s)
- Icing
- Freezing precipitation
- Obscuring phenomena at intended cruising altitude
- Descent/arrival weather
- Alternate weather
- Alternate routing when appropriate

3) High Altitude flight

Required data when applicable to proposed flight:

- Departure/Climb out weather
- Cumulonimbus (CB)/thunderstorm tops, lines, movement
- Tropopause and jet location
- Turbulence/clear air turbulence (CAT)
- Descent/Arrival weather
- Alternate weather

E. Provides forecast en route and terminal weather conditions

Summarizes en route forecast conditions in a logical order, i.e., departure/climb out, en route/cruise, and descent/arrival.

1) VFR flight

Required data when applicable to proposed flight:

- Cloud cover amounts and bases

APPENDIX C TRAINING PROGRAM FOR PILOT WEATHER BRIEFERS (D-82)

- Cloud tops on pilot request
- Visibilities

EXPECTED PERFORMANCE

PERFORMANCE INDICATORS

- | | |
|--|--|
| | <ul style="list-style-type: none">- Mountain obscurement (if applicable)- Turbulence, including wind shear- Precipitation- Freezing precipitation- Icing- Obscuring phenomena- Alternate routing when appropriate |
| 2) IFR flight | Required data when applicable to proposed flight: <ul style="list-style-type: none">- Cloud cover amounts, bases, layers, and tops- Thunderstorms, especially embedded- Turbulence, including wind shear- Freezing level(s)- Icing- Freezing precipitation- Obscuring phenomena- Alternate routing when appropriate |
| 3) High Altitude flight | Required data when applicable to proposed flight: <ul style="list-style-type: none">- CB/Thunderstorm tops, lines, and movement- Tropopause and jet location- Turbulence/CAT- Freezing level(s)- Descent weather |
| F. Provides destination forecast weather | <ul style="list-style-type: none">- Uses most recent aviation terminal forecast (TAF) when available- When TAF is not available, extracts general forecast from area forecast |

- or transcribed weather broadcast (identifies source)
- Time frame is relevant to ETA

EXPECTED PERFORMANCE

PERFORMANCE INDICATORS

- Includes significant changes 1 hour before/after ETA
 - Includes alternate destination forecast when appropriate
- G. Provides winds aloft forecasts, and temperatures when appropriate
- 1) Provides wind direction and speed
 - Provides wind direction (summarizes when requested)
 - Provides wind speed (summarizes when requested)
 - Uses valid forecast times
 - Interpolates between forecast altitudes when appropriate
 - Upon request, provides most favorable altitude for winds
 - Provides significant changes in direction or speed along the proposed route
 - 2) Provides temperatures aloft
 - Temperatures summarized when applicable
 - Temperatures interpolated when appropriate
 - Must be provided when icing potential exists
 - Provided for high altitude flights
 - Provided on pilot request

Supplementary Information

APPENDIX C TRAINING PROGRAM FOR PILOT WEATHER BRIEFERS (D-82)

Based upon the information available regarding actual and forecast weather conditions, it is the examiner's responsibility to evaluate the briefing in terms of correct interpretation of the available meteorological data, as well as in terms of completeness and relevance.

1) The specific information presented by the examinee must, in the judgment of the examiner, present an accurate picture of what is currently occurring and of what is forecast to occur. In the case of NWS briefers, the forecast will be a modification of the forecast data when conditions require it, but such modification must be supported by current conditions and sound meteorological reasoning. For evaluation purposes only, such modifications must also be identified as departures from existing disseminated forecast data.

The examinee's failure to accurately convey the disseminated or appropriately modified information for all phases of the flight's weather, both current and forecast, will result in point deductions from the maximum scores allocated to the applicable elements under the "BRIEFING CONTENT" section.

2) The opportunity and necessity for summarization varies with each briefing; however, the data sources are constant. The examinee, therefore, shall be evaluated on the utilization of available information for each phase of the flight, in terms of timeliness and completeness, as well as on the nature of what is actually conveyed to the pilot. Failure to use appropriate data sources to satisfy the performance indicators listed above will result in point deductions from the evaluation credit allotted to "CURRENT CONDITIONS" and "FORECAST CONDITIONS." However, the examinee should be questioned on missing data when the formal briefing has been completed. No one should lose points for failing to convey unavailable data.

3) The examinee shall provide the freezing level when the proposed altitude is at or above the actual or forecast freezing level. This criteria is stated to establish an evaluation standard and is intended to apply only to the examination situation.

4) Wind direction shall be given in degrees (true).

5) Temperatures aloft are not routinely given to low-level flight unless, in the opinion of the briefer:

- a. Unusually hot/cold weather is likely to impact altimeter and density considerations,
- b. An icing potential exists,
- c. Requested by the pilot.

3. QUALITY FACTORS

- A. The examinee is expected to organize and summarize the weather conditions in the logical phases of flight, i.e., the departure/climb out, en route/cruise, and descent/arrival phases. The examinee should be familiar with IFR "alternate minimums" which are 2 miles visibility, and a ceiling of 800 feet for nonprecision approach airports or 600 feet for precision approach airports. Alternate routing requirements and aircraft range information should be discussed with the pilot when conditions warrant.
- B. The examinee is expected to anticipate and discern the needs of the pilot, based on the type of flight, altitude(s), and aircraft characteristics (e.g., helicopter, jet, etc.), and to satisfy the pilot's operational needs for weather information without the pilot having to make excessive requests to the briefer for routinely available data.
- C. The examinee is expected to convey an attitude of competence, conveying information in a straightforward and helpful manner without attempting to make the decisions for the pilot. The briefing should be conducted in a professional and courteous fashion.
- D. The examinee is expected to have and convey confidence in the information being imparted and in the conduct of the briefing itself.
- E. Pace and voice quality must be such that the pilot can understand and follow the elements of the briefing, can develop them into an accurate picture of conditions, and can write down pertinent parts without asking for excessive repeats.
- F. Questions appropriate for a pilot or student pilot to ask, which will explore the examinee's level of meteorological and aeronautical knowledge, may also be asked. Such questions should only be used to provide a basis for evaluation in areas not

demonstrable during other portions of the briefing. Failure of the examinee to meet the performance standards described above in answering such questions will result in point deductions from the total allotted to "handling of specific questions of pilot." If the examiner judges that a complete description of conditions has been given and that no questions are appropriate, all allotted points shall be awarded.

G. The examiner's evaluation of miscellaneous elements must include the use of briefing aids (for face-to-face briefings); knowledge of local terrain and/or the potential for local meteorological anomalies (when location and type of flight make it appropriate); relevant requests for pilot reports; and demonstration of aeronautical knowledge (e.g., VFR minimums, standard IFR alternate requirements, the minimum enroute altitude concept, altimeter setting information requirements, and the density altitude concept and effects). Source materials for aeronautical knowledge elements include course supplemental texts and the Aeronautical Information Manual, Part 1. When the opportunity for evaluation of these factors has not presented itself during the briefing, the examiner will ask questions consistent with the briefing environment to provide a basis for evaluation and allocation of points.